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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,234	03/12/2004	Trent A. Shidaker	WUR 50656/USw/2	7528

62068 7590 03/09/2012

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EXAMINER	
SERGENT, RABON A	

ART UNIT	PAPER NUMBER
1765	

NOTIFICATION DATE	DELIVERY MODE
03/09/2012	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/799,234	SHIDAKER ET AL.	
	Examiner	Art Unit	
	Rabon Sergent	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2011 and 08 July 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,9,11,14-16,21,22,24 and 25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,9,11,14-16,21,22,24 and 25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 improperly depends from cancelled claim 13.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 3-7, 9, 11, 14-16, 21, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dempsey et al. ('696) in view of Parks et al. ('176) or Mackey ('553 or '528) and further in view of Gillis et al. ('107 or '939).

Dempsey et al. disclose the production of molded polyurethane products, including SRIM products, wherein an internal mold release agent comprising fatty polyesters, that correspond to applicants' claimed fatty polyester, is utilized with a polysiloxane surfactant that corresponds to applicants' claimed poly(dimethylsiloxane)-polyoxyethylene surfactant. Dempsey et al. disclose

this surfactant as L-6980. See example 1. Dempsey et al. further teach at column 8, line 16 that surfactants corresponding to those of applicants are preferred components of the composition. The reference further discloses polyurethane yielding reactants that correspond to those of applicants. See columns 5 and 6.

4. Though Dempsey et al. fail to specifically teach that the fatty acid component of column 9 is beneficial for mold release, it is noted that applicants' specifically claimed mold release agent comprising both a fatty polyester and a fatty acid were known to be useful internal mold release agents for RIM and SRIM polyurethane moldings at the time of invention. This position is supported by the teachings of Parks et al. and Mackey. Parks et al. disclose applicants' claimed internal mold release agent within the abstract; column 2; and column 3, lines 1-46. Mackey discloses applicants' claimed internal mold release agent within the abstract and columns 3 and 4. Therefore, these teachings provide further motivation to employ the disclosed fatty acids of Dempsey et al. The references further disclose the use of surfactants. See column 7, lines 30-47 within Parks et al. See column 9, lines 18-20 within Mackey.

5. Furthermore, Gillis et al. disclose that the combination of polysiloxane surfactants with mold release agents comprising a fatty acid compound yields a synergistic result in terms of the effectiveness of the mold release property in SRIM systems. See column 2, line 53 through column 3, line 26. While Gillis et al. fail to specifically disclose applicants' claimed surfactant and mold release agent, the position is taken that, since each of the disclosed mold release agents within Dempsey et al., Parks et al., and Mackey is derived from long chain fatty compounds, the mold release agents of these references are analogous to the mold release agent of Gillis et al. to the extent that one of ordinary skill would have expected them to yield comparable release

properties to that of Gillis et al. Accordingly, one would have reasonably expected that the combined use of fatty compound based release agents and polysiloxanes would yield SRIM compositions having improved mold release, relative to compositions not employing these respective components in combination. Furthermore, since mold release properties have been linked to the polysiloxane surfactant, it stands to reason that increasing the amount of the polysiloxane surfactant would be expected to improve mold release properties; therefore, it would have been obvious to increase the amount of polysiloxane surfactant utilized thereby increasing the EO content contributed by the surfactant. It has been established that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

6. Claims 1, 3-7, 9, 11, 14-16, 21, 22, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks, et al. ('176) in view of Dempsey et al. ('696) and further in view of Gillis et al. ('107 or '939).

Parks et al. disclose internal mold release systems for the production of high density molded SRIM parts, wherein the polymer is produced from polyether polyols; low molecular weight polyols, such as glycerol and trimethylolpropane (crosslinking agents), and derivatives of 4,4'-MDI, including p-MDI. See column 4, lines 37-60 and column 5, lines 10-34 and 67. Tertiary amine catalysts are disclosed as being preferably used at column 6, lines 53-55. The internal mold release system employs a fatty polyester, which is preferably derived from the reaction of adipic acid, pentaerythritol, and oleic acid (see column 3, lines 23-31), and an additional fatty acid, wherein oleic acid is preferred (see column 3, lines 32-46). Furthermore, foam stabilizers, such as polyether siloxanes, are disclosed at column 7, lines 43-47; however, it

is noted that the use of components such as blowing agents are not mandated; therefore, the closed language of claim 25 is met by the Parks et al. disclosure.

7. Though Parks et al. disclose applicants' claimed fatty polyester and fatty acid components and the use of polyether siloxanes, in general, Parks et al. fail to disclose a specific reaction system employing the instantly claimed fatty polyester, fatty acid, and poly(dimethylsiloxane)-polyoxyethylene surfactant. However, the position is taken that the combined use of the claimed components in the production of polyurethane molded products was known at the time of invention. Dempsey et al. disclose the production of molded polyurethane products, including SRIM products, wherein an internal mold release agent comprising fatty polyesters, that correspond to applicants' claimed fatty polyester, is utilized with a polysiloxane surfactant that corresponds to applicants' claimed poly(dimethylsiloxane)-polyoxyethylene surfactant. Dempsey et al. disclose this surfactant as L-6980. See example 1. Dempsey et al. further teach at column 8, line 16 that surfactants corresponding to those of applicants are preferred components of the composition. Dempsey et al. also disclose the incorporation of fatty acids, that correspond to those claimed, within the composition. See column 9, lines 3-15. Furthermore, Gillis et al. disclose that the combination of polysiloxane surfactants with mold release agents comprising a fatty acid compound yields a synergistic result in terms of the effectiveness of the mold release property in SRIM systems. See column 2, line 53 through column 3, line 26. While Gillis et al. fail to specifically disclose applicants' claimed surfactant and mold release agent, the position is taken that, since each of the disclosed mold release agents within Parks et al. and Dempsey et al. is derived from long chain fatty compounds, the mold release agents of these references are analogous to the mold release agent of Gillis et al. to the

extent that one of ordinary skill would have expected them to yield comparable release properties to that of Gillis et al. Accordingly, one would have reasonably expected that the combined use of fatty compound based release agents and polysiloxanes would yield SRIM compositions having improved mold release, relative to compositions not employing these respective components in combination. Furthermore, since mold release properties have been linked to the polysiloxane surfactant, it stands to reason that increasing the amount of the polysiloxane surfactant would be expected to improve mold release properties; therefore, it would have been obvious to increase the amount of polysiloxane surfactant utilized thereby increasing the EO content contributed by the surfactant. It has been established that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. Applicants' arguments have been considered; however, they are insufficient to overcome the prior art rejection. Firstly, the position taken above and within the Advisory Action of July 22, 2010 with respect to the relationship of the amount of surfactant to mold release properties has been maintained. For the convenience of all concerned, the position taken within the Advisory Action is reproduced as follows:

> Despite applicants' remarks, the skilled artisan would have reasonably expected release characteristics to some extent be based on quantity or concentration of siloxane surfactant utilized. One would expect that greater concentration of surfactant in the polymer would result in greater concentration of the surfactant in the polymer at the mold/polymer interface, thereby affecting mold release. All of applicants' argued examples are ineffective to establish that this argued relationship is unsupported or disproved, because

> the argued examples neither establish nor disprove a nexus between mold release and amount of surfactant utilized. The examples vary other components (while mostly holding the content of surfactant constant); therefore, there is no way to establish the relationship between the number of releases and the quantity of surfactant used. In other words, there is nothing on the record to indicate that the number of releases is not based on some other variable. Definitive conclusions pertaining to the relationship between number of releases and quantity of surfactant would have to be derived from examples where all factors are held constant save for the quantity of surfactant.

The examiner's remarks within the Advisory Action serve to explain why the argued examples are deficient to support applicants' position. Despite applicants' remarks, the examiner finds no deficiency with his position. Though the examiner has withdrawn his position concerning the reliance on the Titanium Metals Corp. of America v. Banner decision, the examiner maintains that it would have been expected that increasing the amount of the polysiloxane surfactant would improve mold release properties; therefore, it would have been obvious to increase the amount of polysiloxane surfactant utilized thereby increasing the EO content contributed by the surfactant. With this position in mind, applicants' examples have again been considered; however, they are insufficient to overcome the prior art rejection, because the showings are not commensurate in scope with the claims in terms of reactant species and amounts. It has been held that the claims must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. It has further been held that a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. For example, each of applicants' examples employs two specific active hydrogen components, a specific polyisocyanate, water, a

specific blend of catalysts, as well as specific surfactants; however, applicants' claims 1 and 22 fail to be so narrowly limited. Accordingly, applicants' examples are of insufficient scope to establish any probative showing of unexpected results for the full scope of the claims. To further support the position that showings of unexpected results must be commensurate in scope with the claims, the examiner relies upon *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990) and *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 777 (Fed. Cir. 1983), as well as the guidelines within MPEP 2145. Secondly, applicants have argued that Dempsey et al. provide no guidance as to why one would make the modifications asserted by the examiner. In response, applicants' argument fails to appreciate the combined teachings of the references, in particular the combined teachings in view of Gillis et al. with respect to the aforementioned synergistic relationship, and what these teachings would have suggested to the skilled artisan. Appropriate motivation and guidance is not limited to the teachings found solely within Dempsey et al. Therefore, the obviousness rejection has been maintained for the reasons set forth.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571)272-1079.

/Rabon Sergent/
Primary Examiner, Art Unit 1765